CLAIMS

I claim:

1. A method for distinguishing targets from background clutter, comprising the steps of

    (a) inputting data;

    (b) calculating data statistics from said data and using said data statistics to select target specific feature information to distinguish specific targets from background clutter;

    (c) generating said target specific feature information from said data statistics;

    (d) extracting said target specific feature information from said data;

    (e) using said target specific feature information to distinguish specific targets from background clutter; and

    (f) outputting target and background clutter information.

2. The method of claim 1, wherein said data is one-dimensional, two-dimensional, or multi-dimensional.

3. The method of claim 1, wherein said data is digitized imagery, speech signals, or radar signals.

4. The method of claim 1, wherein parallel hardware architectures are employed to use said feature information to distinguish particular targets from background clutter.

5. The method of claim 4, wherein said parallel hardware architectures

comprise neural networks.

6. The method of claim 1, wherein said feature information is contrast-based or texture-based.

7. The method of claim 1, wherein said feature information is further used to distinguish two target classes or a plurality of target classes from one another.

8. The method of claim 1, wherein Hebbian learning techniques are used to select said target specific feature information.

9. A classification system, comprising

   (a) a calculator to calculate data statistics from a data input;

   (b) a selector to use said data statistics outputted from said calculator to select target specific feature information to distinguish specific targets from background clutter, wherein said target specific feature information uniquely describes a target for recognition purposes;

   (c) a generator to generate said target specific feature information from said data statistics outputted from said calculator;

   (d) a feature extractor to extract target specific feature information from said data input; and

   (e) a classifier to use said target specific feature information extracted from said data input by said feature extractor to distinguish targets from background clutter and output target and background clutter data.

10. The classification system of claim 9, wherein said data input is one-dimensional, two-dimensional, or multidimensional.

11. The classification system of claim 9, wherein said data input is digitized imagery, speech signals or radar signals.

12. The classification system of claim 9, wherein parallel hardware architectures are employed in the classifier to use said feature information to distinguish particular targets from background clutter.

13. The classification system of claim 12, wherein said parallel hardware architectures comprise neural networks.

14. The classification system of claim 9, wherein said feature information is contrast-based or texture-based.

15. The classification system of claim 9, wherein said selector employs Hebbian learning techniques to select said target specific feature information.

16. A classification hardware system, comprising

(a) a calculator to calculate data statistics from a data input;

(b) a selector to use said data statistics outputed from said calculator to select target specific feature information to distinguish specific targets from background clutter, wherein said target specific feature information uniquely describes a target for recognition purposes;

(c) a generator to generate said target specific feature information from said data statistics outputed from said calculator;

(d) a feature extractor to extract target specific feature information from said data input; and

(e) a classifier to use said target specific feature information extracted

from said data input by said feature extractor to distinguish targets from background clutter and output target and background clutter data.

17. The classification hardware system of claim 16, wherein said selector employs Hebbian learning techniques to select said target specific feature information.

18. A classification software system, comprising

(a) calculation software to calculate data statistics from a data input;

(b) selection software to use said data statistics outputed from said calculator to select target specific feature information to distinguish specific targets from background clutter, wherein said target specific feature information uniquely describes a target for recognition purposes;

(c) generator software to generate said target specific feature information from said data statistics outputed from said calculator;

(d) feature extraction software to extract target specific feature information from said data input; and

(e) classification software to use said target specific feature information extracted from said data input by said feature extractor to distinguish targets from background clutter and output target and background clutter data.

19. The classification software system of claim 18, wherein said selector employs Hebbian learning techniques to select said target specific feature information.